

**RECEIVED
CENTRAL FAX CENTER**

JUL 05 2007

Remarks:

Reconsideration of the application is respectfully requested.

Claims 1 - 18 and 20 - 22 are presently pending in the application. As it is believed that the claims were patentable over the cited art in their original form, the claims have not been amended to overcome the references.

In item 2 of the above-identified Office Action, claims 1 - 2, 5, 7 - 8, 10 - 18 and 20 - 22 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U. S. Patent No. 6058,844 to Niemiec ("NIEMIEC") in view of U. S. Patent No. 4,508,033 to Fischer ("FISCHER"), U. S. Patent No. 3,238,869 to West et al ("WEST") and U. S. Patent No. 3,875,682 to Justus et al ("JUSTUS"). In item 3 of the Office Action, claims 3 - 4 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over NIEMIEC in view of FISCHER, WEST and JUSTUS, and further in view of U. S. Patent No. 6,550,390 to Frankenberger ("FRANKENBERGER"). In item 4 of the Office Action, claims 6 and 9 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over NIEMIEC in view of FISCHER, WEST and JUSTUS, and further in view of U. S. Patent No. 5,913,471 to Makosch et al ("MAKOSCH").

Applicant respectfully traverses the above rejections.

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More particularly, claim 1 recites, among other limitations:

a pull roll disposed downstream of said dryer for conveying the web along said path with a given tensile stress that is considerably lower than a tensile stress in a printing path upstream of said at least one press cylinder, said given tensile stress being less than 50 N/m; [emphasis added by Applicant]

Similarly, Applicant's independent claim 7 recites, among other limitations:

a first pull roll disposed downstream of said dryer to convey the web along the path with a given tensile stress which is considerably lower than a tensile stress in a printing path upstream of said at least one press cylinder, said given tensile stress being less than 50 N/m; [emphasis added by Applicant]

Additionally, Applicant's independent claim 14 recites, among other limitations:

setting a second tensile stress of the web, being considerably reduced as compared with the first tensile stress, along the drying path, the second tensile stress being less than 50 N/m [emphasis added by Applicant]

As such, Applicant's claims require, among other limitations, that the tensile stress of the web downstream of the dryer is considerably reduced compared with the upstream tensile stress, the downstream tensile stress being less than 50 N/m. The above limitations of Applicant's claims, among others, are not rendered obvious by the combination of NIEMIEC in view of FISCHER, WEST and JUSTUS, as alleged in the Office Action.

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More particularly, the Office Action combines printing press of **NIEMIEC** with the pull roll of **FISCHER**, stating:

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the pull roll of Fischer with the printing machine of Niemiec in order to more smoothly transition the web from the printing press cylinders into the dryer.

Further, page 4 of the Office Action states, in part:

Although Niemiec does not explicitly teach controlling the second tensile stress to a value less than 50 N/m, one having ordinary skill in the art would recognize that the acceptable tensile stress would be highly dependent upon the type of material used in the web and therefore the ideal values could be best determined through routine experimentation. [emphasis added by Applicant]

Applicant respectfully disagrees with the allegations made in the Office Action stating that a person of ordinary skill in this art would ever arrive at using a second tensile stress of less than 50 N/m in a printing machine of **NIEMIEC** having the pull roll of **FISCHER**. Rather, the combination of **NIEMIEC** and **FISCHER** made in the Office Action would specifically teach a person of ordinary skill in this art away from using a second tensile stress of less than 50 N/m, and thus, would specifically teach away from Applicant's claimed invention.

For example, a person of ordinary skill in the art would understand from the **NIEMIEC** reference that a reduction of

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fluting might be obtained if the freshly printed web is spread in its width-wise direction, after the web exists from the dryer and prior to or during the cooling of the web in the chill roll section. In order to do this, NIEMIEC discloses using the convex shaped roller 20a of Fig. 2 of NIEMIEC or the bowed roller 30b of Fig. 4 of NIEMIEC.

In contrast to the disclosure of NIEMIEC, FISCHER discloses providing a web capturing apparatus (12 of FISCHER) downstream of the last printing unit (4 of FISCHER) and upstream of the dryer (8 of FISCHER), the web catching apparatus (12 of FISCHER) including two cylinders (14 and 15 of FISCHER) equipped with an ink-accepting covering. See, for example, col. 3 of FISCHER, lines 1 - 8. Col. 3 of FISCHER, lines 3 - 11, state:

The cylinders 14, 15 are each provided with an ink-accepting covering, such as a rubber blanket 16 and 17, respectively, which similarly to the rubber blankets used in offset machines are fastened thereon with the aid of tensioning devices, as well known, disposed in grooves or slots. Thus the cylinders 14, 15 serving as capturing cylinders may be of the same design and same size as the rubber cylinder 5 used in the printing stations. [emphasis added by Applicant]

As such, FISCHER discloses that the ink accepting covering on the cylinders 14, 15 can be rubber blankets 16, 17, of the same design as the rubber cylinder 5 used in the printing stations (i.e., in the printing units of the press).

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Additionally, **FISCHER** discloses that, like most blanket-to-blanket presses, the blanket (rubber) cylinders of the printing stations 1 - 4 of **FISCHER** and the cylinders 14 and 15 of **FISCHER** are disposed offset from the vertical, in order to obtain a slight looping of a part of the web about the cylinders, or in other words, have the web partially wrapped around the cylinders 14, 15 of **FISCHER**, which is closer to the subsequent dryer. See, for example, col. 4 of **FISCHER**, lines 9 - 13. This partial wrap of the web about one of the cylinders 14, 15, described in **FISCHER**, in combination with the tendency of the freshly printed ink to make the web stick at the surface of the rubber blanket (commonly known as ink tack), makes it necessary, in practice, for the apparatus described in **FISCHER** to always require a comparatively high web tension, in order to overcome the ink tack and peel the web off the blanket cylinders 14, 15. Such would be understood about the apparatus of **FISCHER** by a person of ordinary skill in this art.

Moreover, this ink tack between the blanket cylinders 14 and 15 of **FISCHER**, and the freshly printed web represents an essential feature of the apparatus of **FISCHER**. It is a goal of **FISCHER** to use the ink tack such that, in the event of a web break, the tack of the fresh ink on the rubber blankets 16, 17 of **FISCHER** promotes the torn paper web to wrap itself

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immediately about one of the cylinders. See, for example,
col. 3 of **FISCHER**, lines 49 - 56, which state:

Upon the occurrence of a tear in the web, there is no delay in the paper web capturing apparatus according to the invention, because the cylinders 14, 15 acting as capturing cylinders are continuously in engagement with one another, and the torn paper web can thus wrap itself immediately about one of the cylinders, an action which is further promoted by the fresh ink on the rubber blankets 16, 17. [emphasis added by Applicant]

As such, the **FISCHER** reference discloses to a person of ordinary skill in this art that the resulting ink tack is an advantage. Keeping in mind this essential feature of **FISCHER**, a person skilled in the art will immediately recognize that when installing the web catching apparatus 12 of **FISCHER** in the press of **NIEMIEC**, the tension of the web inside the dryer must be at least the same or even higher than the web tension in the printing units, in order to peel the web off the rubber blankets 16, 17. In other words, when installing the apparatus 12 of **FISCHER** in the press of **NIEMIEC**, a person of ordinary skill in this art will recognize that the tension of the web inside the dryer has to be kept at about the same level as inside the printing units in order to avoid that the web wraps around one of the blanket cylinders 14, 15 of **FISCHER**, even during the normal printing operation.

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Because, conventional devices use a stress of about 470 - 500 N/m, and because the disclosure of **FISCHER** requires the tension of the web inside the dryer to be kept at about the same level as inside the printing units, the tension of the web in the dryer of **FISCHER** would be understood by a person of ordinary skill in the art to be about 470 - 500 N/m. However, contrary to what would be understood by a person of skill in this art in view of **FISCHER** and **NIEMIEC**, Applicant's independent claims clearly require, among other limitations, **that the tensile stress of the web downstream of the dryer be less than 50 N/m**, which is about one tenth of the tensile stress of the web in the upstream printing units. Whereas the Office Action alleges that "routine experimentation" would result in Applicant's claimed invention, Applicant respectfully disagrees. Applicant's reduced tensile stress in the drying path (i.e., to about 10% of the conventional tensile stress) is directly contrary to convention, common knowledge of people skilled in this art **and the combined teachings of the cited references**. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. Nothing in the references themselves, or in the ordinary skill in the art,

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would motivate a person of ordinary skill in this art to reduce the tensile stress in the drying path so significantly, contrary to conventional practice.

Further, item 5 of the Office Action stated, in part:

In response to applicant's argument that the conventional tensile stress for a printing path is around 500 N/m, there is no reference to any outside source beyond applicant's disclosure of this figure. Furthermore, as discussed in the above rejection, one having ordinary skill in the art would recognize that an optimal tensile stress would vary dependent upon the type of material used in the web. For example, a thin, paper web would react very differently to stress from a heavy, textile fabric. Therefore, applicant's arguments would appear to be based upon specific process limitations not included in the claims.

[emphasis added by Applicant]

Applicant respectfully disagrees. It is part of the general knowledge in this art that, in printing material web processing machines of the type presently claimed by Applicant, i.e., in which the printing material is printed by at least one printing cylinder and dried in a dryer, the average web tension in the printing section always has to be in the range of 500 N/m in order to obtain a reasonable printing quality.

As such, the FISCHER and NIEMIEC references, in combination, not only fail to teach or suggest a limitation of Applicant's claims, but the combination also teaches away from Applicant's

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claims. The combination of **FISCHER** and **NIEMIEC** absolutely teaches away from the above limitation of Applicant's independent claims. Further, the **JUSTUS, WEST, GREGORY, FRANKENBERGER** and **MAKOSCH** references do not cure the above-discussed deficiencies of the **FISCHER** and **NIEMIEC** references.

It is accordingly believed that none of the references, whether taken alone or in any combination, teach or suggest the features of claims 1, 7 and 14. Claims 1, 7 and 14 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claims 1, 7 or 14.

In view of the foregoing, reconsideration and allowance of claims 1 - 18 and 20 - 22 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made.

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Please charge any fees that might be due with respect to
Sections 1.16 and 1.17 to the Deposit Account of Lerner
Greenberg Stemer LLP, No. 12-1099.

Respectfully submitted,



For Applicant

Kerry P. Sisselman
Reg. No. 37,237

July 5, 2007

Lerner Greenberg Stemer LLP
Post Office Box 2480
Hollywood, FL 33022-2480
Tel: (954) 925-1100
Fax: (954) 925-1101